# BHS Calculus Curriculum Pacing Guide

**Course:** Calculus - Semester Long  
**Grade:** 11-12

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| ● Functions and graphs  
● Exponential functions  
● Functions & logarithms  
● Trig functions  
● Chapter test | ● Derivative of a function  
● Differentiability  
● Rules for differentiation  
● Velocity and acceleration  
● Derivatives of trig functions  
● Chain rule  
● Implicit differentiation  
● Derivatives of exponential & log functions |
| **Limits and Continuity** | **Limits and Continuity** |
| ● Rates of change and limits  
● Limits involving infinity  
● Continuity  
● Tangent lines  
● Chapter test | **Limits and Continuity** |

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| ● Extreme values of functions  
● Mean value theorem  
● \( f'(x) \) and \( f''(x) \) and the graph of \( f(x) \)  
● Modeling and optimization  
● Linearization  
● Related Rates | ● Estimating with finite sums  
● Definite Integrals  
● Antiderivatives  
● Fundamental theorem of calculus  
● Trapezoidal rule  
● Anti-differentiation by substitution  
● Anti-differentiation by parts  
● Exponential growth and decay |

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<td><strong>Applications of Definite Integrals</strong></td>
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| ● Integral as Net Change  
● Areas in the plane  
● Volumes | ● Standardized Test Prep  
● Reading Comprehension (Word Problems)  
● Calculator use  
● Problem Solving  
● Math Vocabulary |